

Message

From: Walker, Stuart [Walker.Stuart@epa.gov]
Sent: 11/9/2018 10:55:17 PM
To: LEE, LILY [LEE.LILY@EPA.GOV]
Subject: RE: Thoughts on Dan Hirsch report on Hunter's Point
Attachments: HuntersPtReport3CleanupStandards.pdf

I forgot to attach my yellow highlighted version of the report

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From: Walker, Stuart
Sent: Friday, November 09, 2018 5:53 PM
To: LEE, LILY <LEE.LILY@EPA.GOV>
Subject: Thoughts on Dan Hirsch report on Hunter's Point

Lily, per our discussion I am sending you below are some initial comments/thoughts I had on the HPS report by Dan Hirsch. We can discuss these if you want. I provided screen shots (with some of my yellow text highlights added) from Dan's report, followed by my thoughts/comments.

1. Page vi

Similarly, while the Navy claimed it was using EPA's Preliminary Remediation Goals (PRGs) for cleaning up contaminated soil, buried further in the document was a brief reference indicating that it was in fact using values from 1991. EPA has updated those PRGs over time, making them

I think if these were EPA PRGs in 1991, they are probably R9 or from RAGS Part B. The PRG calculator was not issued until 2002.

2. Page 7

EPA Superfund guidance aims for reducing contamination so as to produce an excess cancer risk of one-in-a-million (10^{-6}). The PRGs are set as the concentration that will produce that risk. (If one can't readily meet that risk goal, one can apply for permission for a higher residual risk, based on CERCLA's nine balancing and other criteria, but in no case over a risk of one-in-ten-thousand. The Navy has made no such request.) Indeed, the Navy committed in its Records of Decision to clean up HPS radionuclide contamination to PRG levels, i.e., to a risk of one-in-a-million. However, as seen in the table below, using EPA's PRG Calculator to estimate risk at the cleanup levels actually employed by Navy, associated risks are far, far greater than the promised one-in-a-million level, and for several radionuclides, well above the absolute upper limit on allowable risk of one-in-ten-thousand.

EPA doesn't promise 1×10^{-6} , it is a point of departure.

3. Page 9

In general, EPA aims for annual doses in the range of a few hundredths of a millirem/year in order to be roughly equivalent to its goal of one-in-a-million risk.¹¹ If the risk goal the Navy promised after cleanup of one-in-a-million were indeed being carried out, the radiation dose from the Navy cleanup levels should be on the order of 0.03 millirem/year.¹²

No, it is incorrect that Superfund uses dose based PRGs that correspond to the 1×10^{-6} risk based PRGs. If there is a dose based ARAR that is protective (e.g., 12 mrem/yr or below), then EPA uses that dose limit when running the DCC calculator.

4. Page 26

First of all, more than one parcel, including Parcel A which has significant numbers of residents on it, was released *without restrictions*. In other words, there are no prohibitions on growing fruit or vegetables. On a recent trip to Parcel A, for example, we visited residents in a house; across the street, a block away, vegetables and fruit tree grow.

This is a key component of the risk assessment.

If the areas where they identified food were considered to be released for unrestricted release, the risk assessment should include homegrown produce at least (since it's an urban area, any of the farm animals in the farmer scenario may not be suitable although sometimes suburban areas do include someone with chickens. One of my best friends growing up Maryland suburbs had chickens back in the 1970's although then they were unique enough to get a page 1 article in the Washington Post food section. I think this is getting more popular).

If the areas identified in the report with homegrown produce are not part of the released area, then you may want to have a map showing where they are in relation to the contaminated/released areas.

5. Pages 29 and 30

To check the impact of assuming reduced gardening—which does not seem justified given the actual situation in the area, described above—we have performed PRG runs in which half or more of the fruits and vegetables were eliminated, leaving the risk drivers. It produces very little change in the results. It increases the PRG for strontium-90 and radium-226 by a mere 15%, for example, and for plutonium-239 by 23%, trivial in the context of PRGs that are hundreds of times more protective than the cleanup values being employed by the Navy at HPS. We have also run the Calculator with a two foot clean soil cover; for most of the radionuclides of particular concern, it makes little difference. The assumption of a cover would in any case be inappropriate for parcels which have no restrictions; for others, it is not really realistic either, in

that in order to do the development planned at HPS construction will dig through them and soil moved around significantly. We discuss these issues further in our report on institutional controls.]

When running the resident and farmer scenario in the PRG or DCC calculator, if there are no sensitive subpopulations the user should generally switch from fresh weight to cooked weight for the receptor ingestion rates.

The produce that they left in the runs, are those known to be grown in that area of California? That can be answered by asking the county extension office of the US Department of Agriculture.

The use of 2 foot cover in soil only effects external/gamma exposure, but not other pathways such as soil ingestion, food ingestion, resuspension. Those would have to be manually zeroed out (by zeroing out the ingestion for adult and child for those pathways) or the user would go to the 2D scenario. But generally where you have a soil cap you would not allow the growing of produce that breeches the cap and may contact the contamination underneath.

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